DUGWAY PERMIT

MODULE VII

ATTACHMENT 5

HWMU 124
POST-CLOSURE PLAN

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LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

bgs	Below Ground Surface
CFR	Code of Federal Regulations
DAF	Dilution Attenuation Factor
DPG	Dugway Proving Ground
UDSHW	Division of Solid and Hazardous Waste
ft	Feet
FWEC	Foster Wheeler Environmental Corporation
HWMU	Hazardous Waste Management Unit
IDW	Investigation-Derived Waste
LUTP	Post-Closure Land Use Tracking Plan
MCL	Maximum Contaminant Level
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
msl	Mean Sea Level
PCP	Post-Closure Plan
PES	Parsons Engineering Science
Shaw	Shaw Environmental, Inc.
SWMU	Solid Waste Management Unit
TDS	Total Dissolved Solids
TERC	Total Environmental Restoration Contract
TSDF	Treatment, Storage, and Disposal Facility
UAC	Utah Administrative Code
UDEQ	Utah Department of Environmental Quality
UDSHW	Utah Division of Solid and Hazardous Waste
USACE	U.S. Army Corps of Engineers

1.0. INTRODUCTION

The objective of this Post-Closure Plan (PCP) is to ensure that Dugway complies with the Post-Closure Permit issued by the State of Utah in accordance with 40 Code of Federal Regulations (CFR) 265.117, with respect to post-closure inspection requirements. To meet this objective, this PCP provides detailed information regarding the location, regulatory criteria, and post-closure inspections at HWMU 124. Post-closure requirements will continue for a minimum of 30 years after closure of HWMU 124. The post-closure care period may be extended or shortened, as deemed necessary (40 CFR 265.117(a)(2)).

In accordance with 40 CFR 270.28 and UAC R315-3-2.19, the post-closure permit is required to include specific information for a closed facility. As applicable to HWMU 124, the information requirements include:

1. General description of the facility
2. Description of security procedures
3. Copy of general inspection schedule
4. Preparedness and Prevention Plan
5. Facility location information (including seismic and flood plain considerations)
6. Closure Plan or Closure Proposal
7. Certificate of Closure
8. Topographic map, with specific scale

Table 1-1 provides the regulatory citations for the general information requirements and the specific locations in the Attachments or in the Post-Closure Plan where the specific information is presented.

Table 1-1: Summary of HWMU 124 Post-Closure Information Requirements Under 40 CFR 270.14 and UAC R315-3-2.19 and R315-3.2.5 (Page 1 of 2):

Regulation Citation	Requirement Description	Location Requirement is Addressed
40 CFR 270.14(b)(1) UAC R315-3-2.5(b)(1)	General Description of the Facility	Post-Closure Permit, Attachment 1;
40 CFR 270.14(b)(4) UAC R315-3-2.5(b)(4)	Description of Security Procedures	Section 3.0
40 CFR 270.14(b)(5) UAC R315-3-2.5(b)(5)	General Inspection Schedule	Section 7.0
40 CFR 270.14(b)(6) UAC R315-3-2.5(b)(6)	Preparedness and Prevention	Section 4.0
40 CFR 270.14(b)(11)(i-ii, v) UAC R315-3-2.5(b)(11) (i-ii, v)	Facility Location Information Applicable seismic standard	Section 5.0
40 CFR 270.14(b)(11) (iii-v) UAC R315-3-2.5(b)(11) (iii-v)	Facility Location Information 100-year floodplain	Section 6.0
40 CFR 270.14(b)(14) UAC R315-3-2.5(b)(14)	Closure Certification and Notification	Appendix B
40 CFR 270.14(b)(16) UAC R315-3-2.5(b)(16)	Post-Closure Cost Estimate	Federal Facilities are exempt from this requirement
40 CFR 270.14(b)(18) UAC R315-3-2.5(b)(18)	Proof of Financial Coverage	Federal Facilities are exempt from this requirement
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (i)	Topographic Map Map Scale and Date	Figure 2-1 (1 inch = 1000 feet) and Figure 2-3; (1 inch = 60 feet)
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (ii)	Topographic Map 100-year floodplain area	HWMU 124 is not located within a verified 100-year floodplain area;
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (iii)	Topographic Map Surface waters including intermittent streams	There are no surface waters or intermittent streams within the HWMU 124 area Figure 2-2 Figure 2-3
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (iv)	Topographic Map Surrounding land uses	HWMU 124 is within a military base. There are no nearby residents in the vicinity of HWMU 124. Figure 2-3
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (v)	Topographic Map A wind rose (i.e., prevailing windspeed and direction)	There are no residential populations in the vicinity of HWMU 124. The closest residential area is English Village (approximately 8 miles away). A wind rose is not deemed necessary for HWMU 124..
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (vi)	Topographic Map Orientation of Map, North Arrow	Figure 2-3

Table 1-1 (Continued-Page 2 of 2): Summary of HWMU 124 Post-Closure Information Requirements Under 40 CFR 270.14 and UAC R315-3-2.19 and R315-3.2.5.

Regulation Citation	Requirement Description	Location Requirement is Addressed
40 CFR 270.14(b)(19) UAC R315-3-5(b)(19)(vii)	Topographic Map Legal boundaries of the hazardous waste management facility.	The site is shown in Figure 2-3
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (viii)	Topographic Map Access control, fence, gates	The fenced area and access gates are shown in, Figure 2.2
40 CFR 270.14(b)(19) UAC R315-3-2.5(b)(19) (ix)	Topographic Map Injection and withdrawal wells	There are no injection or withdrawal wells in the vicinity of HWMU 124.
40 CFR 270.14(b)(19) UAC R315-3--2.5(b)(19) (xi)	Topographic Map Barriers for drainage or flood control	Figure 2-3
40 CFR 270.14(c) UAC R315-3-2.5(c)(1)	Groundwater Monitoring Information Summary of Groundwater Data	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(2)	Groundwater Monitoring Information Identification of uppermost aquifer	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(3)	Groundwater Monitoring Information Delineation of the Waste Management Area	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(4)	Groundwater Monitoring Information Extent of Plume	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(5)	Groundwater Monitoring Information Detailed Plans/Engineering Report for Proposed Groundwater Program	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(6)(i)	Groundwater Monitoring Information Proposed List of Parameters	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(6)(ii)	Groundwater Monitoring Information Proposed Groundwater Monitoring System	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(6)(iii)	Groundwater Monitoring Information Background Values	Not applicable. No post-closure groundwater monitoring required at HWMU 124.
40 CFR 270.14(c) UAC R315-3-2.5(c)(6)(iv)	Groundwater Monitoring Information A description of the Proposed Sampling	Not applicable. No post-closure groundwater monitoring required at HWMU 124.

2.0. HWMU 124 DESCRIPTION

The following provides a general description of Hazardous Waste Management Unit (HWMU) 124, also known as the Carr Facility Old 3X to 5X Incinerator Pad at Dugway Proving Ground (Dugway), as required by R315-3-2.5(b)(1). A general description of the Dugway installation can be found in Attachment 1.

2.1. Location and History

Hazardous Waste Management Unit (HWMU) 1 (Figure 2-1), is located in the eastern portion of Dugway and the southern portion of the Carr Facility (Figures 2-1 and 2-2). HWMU 124 includes the incinerator pad within an area of 63 feet (ft) by 92 ft. The incinerator pad is a 15-foot by 20-foot concrete pad (Figures 2-3 and 2-4) with an electrical panel and associated conduit. Also within the HWMU are concrete footings of the former above ground fuel tank that provided fuel to the incinerator (Figures 2-3 and 2-4).

HWMU 124 lies on the southeast side of "A" Street, southeast of the 3rd Street and "A" Street intersection. The concrete pad is located adjacent to Building 3157, near the southeastern boundary of the Carr Facility. Other, buildings in the vicinity are Building 3156 located southwest of the concrete drive adjacent to the incinerator pad, and Buildings 3258 and 3259 to the northeast.

All of the buildings are used for storage and are intermittently occupied, according to Dugway staff (Shayes Turley, personal communication, IT, 2002). When operational, an oil-fired incinerator was located on the pad. An above ground, 200 to 250 gallon, fuel oil tank located approximately 30 ft northeast of the incinerator provided fuel for site operations.

2.2. Past Operation

HWMU 124 was used from 1984 until 1986 for incineration of 3X material requiring decontamination. During its operation, the HWMU 124 incinerator was used for decontaminating laboratory clothing, gas mask canisters, equipment, plastic, Styrofoam mannequins, and rubber gloves that were identified as 3X material requiring decontamination. One or two 40-pound batches of waste were processed each day by the incinerator at a temperature of 1,000 degrees Fahrenheit for four hours to ensure 5X level of decontamination**.**

Wastes associated with the operation of the incinerator were stored in 55-gallon drums after each burn. The drums were stored on the pad and were disposed as hazardous waste when use of the incinerator at this location was discontinued. The incinerator was moved to the Baker area in 1987 to incinerate "pathological" waste, as described by an employee in an interview in 1995. The fuel tank and associated piping were removed in 1987. There is no waste remaining at the site.

HWMU 124 was one of the 27 sites listed at Dugway under the UDEQ-UDSHW Stipulation and Consent Order No. 8909884 (dated September 19, 1990). This Consent Order directed Dugway to determine whether hazardous waste management occurred at these sites. This Stipulation and Consent Order was amended in December 22, 1993 and identified HWMU 124 among the sites to be closed.

2.3. Previous Investigations Documentation

The detailed results of previous material, soil, and groundwater sampling, and closure information including the risk assessment are available, for HWMU 124, in the UDSHW public documents listed below in Table 2-1.

Table 2-1: Pertinent UDSHW Library Documents Detailing HWMU 124 Investigations.

Document Title	Received Date	UDSHW Library No.
Ebasco, 1993. Final Nature and Extent Investigation Plan No. 7, SWMUs 55, 63, 90, and 124, Closure Plans for Solid Waste Management Units at Dugway Proving Ground. April.	5/3/93	DPG 00055
United States Army Corps of Engineers, 1996. Dugway Proving Ground Closure Plan, Module 3, Volume 2,SWMU 51,55,58,59,63-1,63-2,90,99,124128,,130,158 and 162,163,165,167,168,169 and 190.	9/27/96	DPG 00029
IT Corporation (IT),, 2001. Supplemental Site Investigation Sampling and Analysis Plan for HWMUs 40, 99, 124, 165, 167, and 190. Dugway Proving Ground, Dugway, Utah.	8/22/2001	DPG 00233
IT Corporation (IT), 2003. Final Closure Report for HWMU 124 - Carr Facility Old 3X to 5X Disposal Pad, Dugway Proving Ground, Dugway, Utah. May	12/8/2003	DPG00390

2.4. Closure Activities

Utah has specific regulations governing the closure and post-closure requirements for interim status/non-notifier hazardous waste treatment, storage and disposal facilities (TSDFs) (UAC R315-7-14; 40 CFR 265.111 by reference). Based on the work performed at HWMU 124 and the risk evaluations presented in the Final Closure Report, the requirements specified under 40 CFR 265, subpart G and a Consent Order have been achieved.

The Certification of Closure (Appendix B) certifies that HWMU 124 meets the closure performance standards under UAC315-7-14 and 40 CFR 265.111 (subpart G) adopted by reference, as follows: (1) minimizes the need for further maintenance, (2) controls, minimizes or eliminates, to extent necessary to protect human health and environment, post

closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere, and (3) complies with closure requirements of this subpart and other applicable requirements. To satisfy the first standard, all wastes have been removed at HWMU 124. All associated structures have been removed or have been approved to remain. No waste remains at HWMU 124. The closure of HWMU 124 has been completed.

Approval for the HWMU 124 Final Closure Report (IT, 2003) was received in a letter dated February 24, 2004, from Mr. Dennis R. Downs, Utah Solid and Hazardous Waste Control Board. Appendix B includes a copy of the HWMU 124, Closure Certification signed and stamped by a Utah-licensed Professional Engineer.

The investigative and closure activities performed at HWMU 124 are described in detail in the Final Closure Report. The former incinerator and fuel storage tank have been removed.

With the investigative and closure actions performed at this site, all stipulations of the Consent Order No. 8909884 have been satisfied for HWMU 124.

2.5. Human Health and Ecological Risk Assessment

Human health and ecological risk assessments were conducted and indicated that the remaining residual contamination does not pose an unacceptable risk as defined in R315-101. Based on the results of the human health risk assessment, HWMU 124 was closed based on continued industrial use.

HWMU 124 did not qualify for risk-based residential closure due to the presence of chlorinated pesticides (aldrin, dieldrin, and heptachlor) in site soils in the vicinity of the former incinerator pad.

Results indicate that there is no unacceptable risk posed at the site. The cancer risk and hazard index are below UAC R315-101 industrial use limits of 1E-04 and 1.0, respectively.

The human and ecological risk assessments are presented in the *Final Closure Report for HWMU 124 - Carr Facility Old 3X to 5X Disposal Pad, Dugway Proving Ground, Dugway, Utah. May, 2003, (IT Corporation (IT)).*

2.6. Surface Water and Groundwater

Based on information presented in various reports (IT, 2000; USACE, 1999; and Ebasco, 1993), Dugway lies in the Basin and Range Province of the western United States. Longitudinal, block-faulted mountain ranges and intervening down-dropped basins characterize the area. The basins are filled with sediments (Tertiary-Quaternary in age) derived from three primary sources: 1) erosion of sedimentary, meta-sedimentary, and igneous rocks in the adjacent up thrown ranges, 2) lake sedimentation, and 3) volcanism.

Since late Pleistocene times, the basin had been occupied intermittently by Lake Bonneville, an immense lake ancestral to the Great Salt Lake. HWMU 124 is located in a relatively flat lying area at an approximate elevation of 4,359 ft mean sea level (msl), underlain by these alluvial and lake sediments.

No surface water features are present in the proximity of HWMU 124. The Camels Back Ridge North West Quadrangle (US Geological Survey [USGS], 1993) topographic map, indicates the nearest natural surface water body to be the northern branch of Government Creek, an ephemeral stream which drains from the Simpson and Sheeprock mountains (southeast of Dugway) towards the Great Salt Lake Desert to the northwest (USACE, 1999). The Camels Back Ridge North West topographic map indicates that surface water generally drains from east to west towards the northern branch of Government Creek.

Lithologic information obtained during collection of surface soil samples and soil borings drilled at HWMU 124 indicate that surface soils, near the concrete foundations and roadways, consist primarily of gravelly silt, indicative of road base fill. Soils generally become finer grained (clays and silts) with depth in all of the 14-soil borings drilled onsite, indicative of lacustrine clays, comprising the Lake Bonneville Formation.

Clay is present from the ground surface to a depth of approximately 31 ft according to the log of 60PZ-1A. This log is from a cone penetrometer test boring, performed by Parsons (PES, 2000) approximately 500 ft southwest of HWMU 124. Three sand zones are found below the clay separated by thin interbeds of clay and silt. The sand zones are found between 31 and 36.8 ft below ground surface (bgs) (Regional Unit B, PES, 2000), 39 to 62 ft bgs, (Regional Unit C, PES, 2000) and 69 to 78 ft bgs (Regional Unit D, PES, 2000). Interbedded sand and silt is present from 78 to 90 ft (attributable to the lower portion of Regional Unit D, PES, 2000). Below 90 ft bgs is a regionally extensive sequence of clay and silt (PES, 2000), extending down to 142 ft bgs, a thickness of 52 ft.

Although monitoring wells have not been installed at HWMU 124, shallow groundwater beneath the HWMU is nonpotable based on data from other HWMUs at Carr. Shallow groundwater encountered in wells located at HWMUs 58, 63-1, 63-2, and 90 (all located in the Carr Area) is described as moderately saline or brackish, with total dissolved solids (TDS) values between 3,000 and 5,000 milligrams per liter (mg/L) (IT, 2001), Groundwater with this range of TDS is classified as non-potable, limited use only (Class III) by the Utah Groundwater Quality Protection Rules (UAC Rule R317-6-3). The shallow groundwater table is encountered at approximately 32.3 ft bgs based on water level measurements in nearby groundwater monitoring wells at HWMU 63-1 (IT, 2000) and flows in a south-southwesterly direction. The average hydraulic gradient in the vicinity of HWMU 124 is estimated at 0.001 ft/ft.

The deeper aquifer in the Carr area is used as a potable water source at depths beginning at about 135 feet bgs based on the log for Water Well 4; however, there is evidence that the potable aquifer is not in hydraulic communication with the saline upper aquifer due to the

presence of a confining clay layer (PES, 2000). Water supply well 5 is located approximately 300 ft north of HWMU 124 and Water supply well 4 is located approximately 400 ft northwest of HWMU 124 (Figure 2-3).

2.7. Closure Notifications

Federal facilities are exempt from submitting notifications to the local zoning authority as required by 40 CFR 264.116 and 264.119, which are incorporated by reference in R315-8-7. Dugway's Post-Closure Land Use Tracking Plan (LUTP) shall be used to monitor land use as required under this Permit in Module VII, Condition VII.F.4.

3.0. SECURITY REQUIREMENTS

The Permittee shall comply with the following security conditions as applicable to HWMU 124:

1. HWMU 124 is located within a federal, military installation (Dugway). As such, the installation is restricted for the common population. Dugway's Base Security (Range Control) shall monitor access to HWMU 124.

2. In addition at HWMU 124, a fence is present around the Carr Facility (Figure 2-2). Signs are present warning against unauthorized entry. .

3. Verify Security facilities are maintained shall be inspected throughout the post-closure care period. The security facilities (i.e., posted signs) to be inspected and the frequency of inspection are listed on the inspection Table 3**.** Dugway shall report to the Division of Solid and Hazardous Waste any decrease of Dugway's Base Security, which could affect the security conditions as applicable to HWMU 124

4. Damaged security facilities shall be noted in the inspection checklist. Repairs shall be completed as soon as practicable after the problem is discovered, in compliance with R3l5-8-2.6(c).

4.0. PREPAREDNESS AND PREVENTION MEASURES

All wastes have been removed from HWMU 124. The Dugway Emergency Response and Contingency Plan (Part B Permit), where applicable to this site, shall be used to announce and respond to emergency conditions.

At a minimum, the site inspector should have a radio or phone and a First Aid kit available during inspections.

5.0. SEISMIC STANDARD

HWMU 124 is not located within 200 feet of active faults that have displacement in Holocene time. Although Utah is tectonically active, most of the earthquake activity occurs about 55 miles to the east along the Wasatch Range Foothills. The U.S. Geological Survey has conducted a study ([U.S. Geological Survey (USGS), 1988]. *Map of Fault Scarps Formed on Unconsolidated Sediments, Tooele 1'x2' Quadrangle, Northwestern Utah*, compiled by T.P. Bamhard and R.L. Dodge) to determine the distribution, relative age, and amount and extent of surface rupture on Quaternary fault scarps in the Tooele 1'x2' Quadrangle in Northwestern Utah. The conclusions of the study state that morphologic and geologic data collected along the fault scarps in the area indicate that all were formed during the later Pleistocene era with no clear evidence of Holocene surface faulting. Several faults inferred on geophysical evidence are located at Dugway; however, there is no evidence of displacement during Holocene time. No hazardous wastes remain at HWMU 124; therefore, even if an earthquake were to occur, no hazardous wastes would be released.

6.0. FLOODPLAIN STANDARD

HWMU 124 is not located within a 100-year verified floodplain. A National Flood Insurance Rate Map, identifying the boundary of the 100-year flood, has not been prepared for Dugway. These are no permanent streams or other surface water bodies on Dugway. Surface water from precipitation flows through well-established drainage channels into the flat plain and evaporates. Like other arid regions, Dugway is subject to flash flooding following high-precipitation events. Flash floods have occurred only four times in the history of the installation: in 1944, 1952, 1973, and 1983. The major area affected during flash floods has been the Government Creek drainage channel, which has overflowed and caused minor inundation of roads at Ditto Technical Center. No hazardous wastes remain at HWMU 124; therefore, even if a flood were to occur, no hazardous wastes would be released.

7.0. POST-CLOSURE INSPECTIONS

7.1. Introduction

HWMU 124 has been closed under a continued industrial use scenario, which prohibits residential use in the areas formerly occupied by the site. To ensure that the area is not reused or developed for residential purposes, annual site inspections and a biannual report shall be required.

7.2. Annual Inspections

General site inspections of the former HWMU 124 site shall be conducted annually before November 1st, to ensure that the former Carr Facility incinerator pad area remains under industrial use. The frequency of inspections can be modified in accordance with UAC R315-3-4.3. A general annual site inspection checklist is included in Appendix A. Completed inspection forms shall be filed with the Dugway Environmental Office. The site shall be visually inspected to ensure the following conditions are maintained at the site:

1. There is no evidence of land use other than for industrial purposes within the former site boundary.
2. That Security Controls are still in place and active at the Carr Facility.

Table 7-1, summarizes the Post-Closure Inspection Schedule for HWMU 124, and lists the items to be inspected and potential problems. Inspection personnel shall note any problems found and shall inform appropriate Dugway representatives.

Table 7-1: HWMU 124 Post-Closure Inspection and Monitoring Schedule

Inspection/Monitoring Item	Method of Documentation	Frequency of Inspection
1) Land use for industrial purposes only. 2) That security controls are still in place and active at the CARR facility.	General Site Inspection Checklist: Appendix A of the Post-Closure Plan)	Annual inspections shall be conducted no later than November 1st, of each year.

7.3. Inspection Follow-up

Copies of completed site inspection checklists (Appendix A) shall be forwarded to the Dugway Environmental Office. The Point-of-Contact for the Dugway Environmental Office is as follows:

Mr. Scott Reed
Dugway Proving Ground Environmental Program Office
Dugway Proving Ground, UT 84022
Telephone: (435) 831-3592

The Dugway Environmental Office shall notify the appropriate personnel to implement corrective action as needed.

Corrective action shall be initiated as soon as practical after identifying the problem, or as directed by Dugway. If the corrective action requires substantial effort, a technical plan shall be prepared to summarize the problem, the potential impacts, the proposed plan for action, and the time frame in which corrective action shall be implemented as required under this Permit. This plan shall be approved by the Executive Secretary and shall be submitted within 30 days of Dugway's decision to implement corrective action.

8.0. SUBMITTALS/REPORTING

8.1. Post-Closure Groundwater Monitoring

Post-Closure groundwater monitoring is not required for HWMU 124.

8.2. Non-Compliance Reporting

The conditions at HWMU 124 are such that the impact to human health and the environment is very unlikely. All wastes have been removed from the site. Hazardous wastes are no longer managed or maintained at the site. Nonetheless, if there is any type of non-compliance with any condition of this Permit, notifications shall be submitted per Permit Conditions VII.C.5.

8.3. Biennial Post-Closure Report

In accordance with R315-3-3.1(l)((9), a Biennial Post-Closure Report shall be submitted to the Executive Secretary for all of Dugway's HWMUs and SWMUs undergoing post-closure care. Post Closure Reports shall be submitted to DSHW no later then March 1st, of the following year, that the report is due. The first Post-Closure reporting year is 2006 for HWMU 7. The report shall be submitted no later than March 1st of 2007 (Table 7-2). Specifically for HWMU 124, the Biennial Post-Closure Report shall include, at a minimum, the following:

1. General site description and conditions
2. Inspection records

Table 7-2: Summary Table of Required Submittals

Required Submittals	Frequency and Submittal Date
Biennial Post-Closure Report	Post Closure Reports shall be submitted to the Division of Solid and Hazardous Waste no later than March 1st, of the following year that the report is due. Reporting years are odd numbered years beginning with 2006, for the duration of the Post-Closure Monitoring Period.
Anticipated Non-Compliance (VII.C.5.).	30 days advance notice of any change, which may result in non-compliance.
24-hour Notification on information concerning the non-compliance, which may endanger public drinking water supplies or human health or the environment (VII.C.5.).	Orally within 24 hours of discovery noncompliance
Five-day written notification on information concerning the non-compliance, which may endanger public drinking water supplies or human health or the environment. The Executive Secretary may waive the 5-day notice, in favor of a 15-day notice (VII.C.5.).	Within 5 days of discovery
Written notification on information concerning the non-compliance, which does not endanger human health or the environment (VII.C.5.).	Submitted with the Biannual Post Closure Report are submitted.

9.0. POST-CLOSURE CERTIFICATION

No later than 60 days after post-closure activities are completed and approved by the Executive Secretary, Dugway shall submit a certification to the Board, signed by Dugway and an independent professional engineer registered in the State of Utah, stating why post-closure care is no longer needed.

REFERENCES

Dugway RCRA Part B Permit

Ebasco, 1993. Final Nature and Extent Investigation Plan No. 7, SWMUs 55, 63, 90, and 124, Contract Task Order DAAA15-91-D-0010, Task Order 01, Closure Plans for Solid Waste Management Units at Dugway Proving Ground. April.

IT Corporation (IT), 2003. *Final Closure Report for HWMU 124 - Carr Facility Old 3X to 5X Disposal Pad, Dugway Proving Ground, Dugway, Utah*. May

IT, 2002. *Shayes Turley, Chief Chamber Test Facility Branch, Dugway, personal communication*.

IT, 2001. *Final Supplemental Site Investigation Sampling and Analysis Plan for HWMUs 40, 99, 124, 165, 167, and 190.* Dugway Proving Ground, Dugway, Utah. Revision 0. December.

IT, 2000. *Fiscal Year 2000 Annual Report and Quality Control Report for Groundwater Monitoring Program*, Dugway Proving Ground, Dugway, Utah.

Parsons Engineering Science (PES), 2000. *Technical Memorandum Groundwater*. April.

Utah Administrative Code (UAC), Utah Hazardous Waste Management Rules, R315-7 to R315-14, R315-50, and R315-101.

United States Army Corps of Engineers, 1999. *Dugway Proving Ground Closure Plan, Module 3, SWMU 124, Final.* January.

U.S. Geological Survey (USGS), 1993. *The Camels Back Ridge North West Quadrangle, Topographic Map.*

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MODULE VII

ATTACHMENT 5

APPENDIX A

HWMU 124
INSPECTION CHECKLIST

GENERAL SITE INSPECTION CHECKLIST
HWMU 124 Carr Facility Old 3X to 5X Incinerator Pad
Dugway Proving Ground, Utah
Post-Closure Plan

1. Inspect the incinerator pad and surrounding land use. Does the area remain in industrial use?

☐ Yes
☐ No*

If no, notify the Dugway Environmental Office immediately (same business day) to determine the appropriate course of action.

Comments: _____

2. Check if any dig permits have been issued in the past year in the vicinity of HWMU 124.

☐ Yes *
☐ No

If yes, verify any change to the site. Notify the Dugway Environmental Office to determine the appropriate course of action concerning any change in the site condition.

3. Security Controls are in place and active at the CARR facility.

☐ Yes *
☐ No

Comments: _____

Additional Notes ***(Time, temperature, wind direction, and other observations)***

_____

_____

_____

_____

_____

_____
Name of Inspector

_____
Company

_____ _____
Signature of Inspector Time and Date of Inspection

DUGWAY PERMIT

MODULE VII

ATTACHMENT 5

APPENDIX B

HWMU 124

CERTIFICATION OF CLOSURE

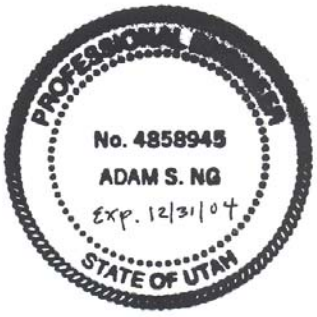
CERTIFICATION OF CLOSURE

The Closure Report for Hazardous Waste Management Unit (HWMU) 124 at Dugway Proving Ground, Utah has been prepared by Shaw Environmental in accordance with the closure requirements specified under the Utah Administrative Code (UAC) 315-7-14 and 40 Code of Federal Regulations 265, Subpart G. The requirements of UAC 315-101 form the basis for the risk-based criteria in the closure of HWMU 124.

In accordance with 40 CFR 265.115, the signature and seal certify that a licensed professional has reviewed the Closure Report in accordance with the above referenced regulatory requirements.

Respectfully submitted,

Scott Reed
Directorate of Environmental Programs
Dugway Proving Ground



Adam S. Ng, Ph.D., P.E.
Utah Registered Civil Engineer No. 4858945-2202
Shaw Environmental, Inc.

DUGWAY PERMIT

MODULE VII

ATTACHMENT 5

HWMU 124

FIGURES

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	CONCORD	R. LANGSTOM 10/9/2002	T. Ervin 10/31/03	A. Ng 10/31/03	870502-B541

FORMAT REVISION 2/26/99

GREAT SALT LAKE DESERT

DUGWAY PROVING GROUND

WIG MOUNTAIN

CEDAR MOUNTAINS

SKULL VALLEY

BAKER AREA

BURNS ROAD

AVERY AND DITTO TECHNICAL CENTERS

FRIES PARK

Drum Storage Area

STARK ROAD

FIVE MILE HILL

ENGLISH VILLAGE

CARR FACILITY

HWMU 124

DURAND ROAD

GRANITE PEAK

CAMELS BACK RIDGE

SIMPSON BUTTES

GOVERNMENT CREEK VALLEY

Yellow Jacket Area

Southern Triangle Area

DUGWAY RANGE

DUGWAY VALLEY

— 40° 00'

LEGEND

- Trail or unpaved road
- Secondary road
- Primary road
- 124 HWMU location
- Installation boundary

N

0 2 4

SCALE IN MILES

Shaw™ Shaw Environmental, Inc.

U.S. ARMY
DUGWAY PROVING GROUND
UTAH

FIGURE 2-1

DUGWAY PROVING GROUND
INSTALLATION AND HAZARDOUS WASTE MANAGEMENT UNIT
LOCATION MAP

DUGWAY PROVING GROUND

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	CONCORD	R. Langston 3/11/2004	T. Ervin 3/18/04	A. Ng 3/19/04	870502-B544

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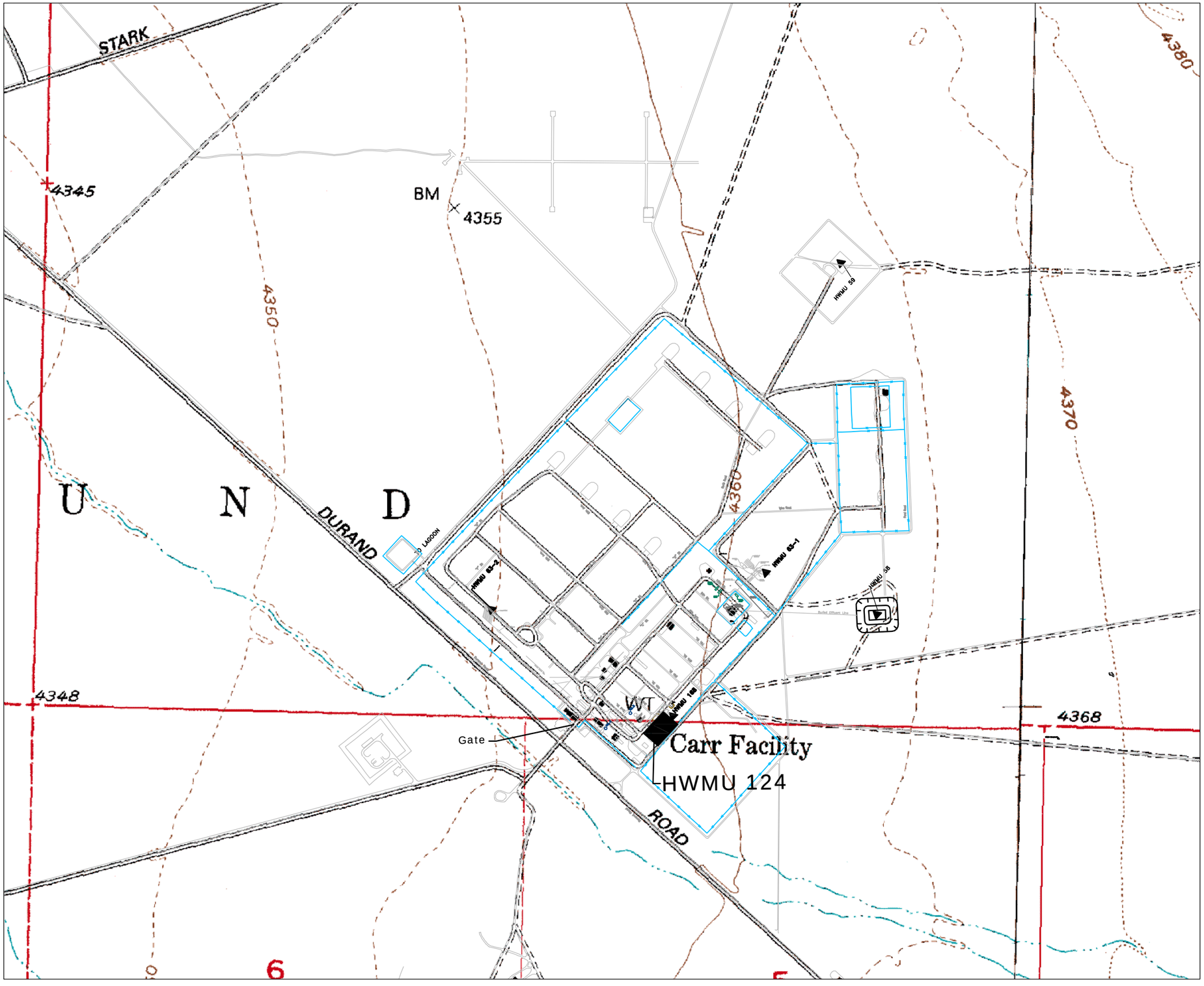

LEGEND

- HWMU 124 Location
- HWMU Location
- 4370 Contour Line (5 Foot Intervals)
- Fence

N

SCALE IN FEET

1000 0 1000

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U.S. Army
Corps of Engineers
Sacramento District

FIGURE 2-2

TOPOGRAPHICAL MAP
of CARR FACILITY

DUGWAY PROVING GROUND
DUGWAY, UTAH

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
R. Langston 3/11/2004	T. Ervin 3/18/04	A. Ng 3/19/04	870502-B546

IMAGE	X-REF	OFFICE
---	---	CONCORD

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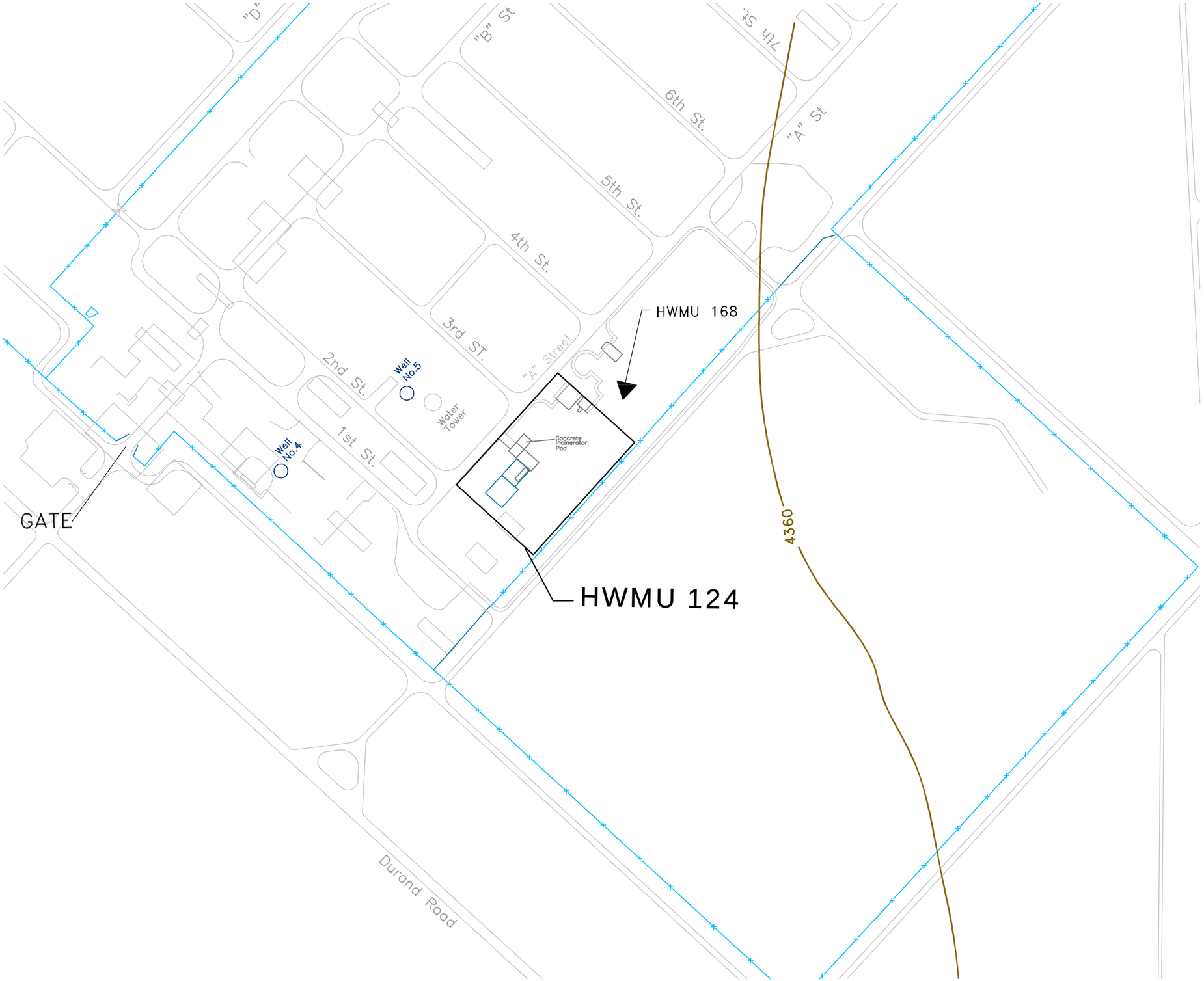

LEGEND

- HWMU 124 Location
- HWMU Location
- 4360 Contour Line (5 Foot Intervals)
- Fence

N

SCALE IN FEET

60 0 60

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FIGURE 2-3

TOPOGRAPHICAL MAP
OF HWMU 124

DUGWAY PROVING GROUND
DUGWAY, UTAH

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	CONCORD	R. LANGSTON 3/24/2003	T. Ervin 10/31/03	A. Ng 10/31/03	870502-B543

FORMAT REVISION 2/26/99

LEGEND

- HWMU Monument
- Street/Building Boundaries

3rd St.

HWMU 124

Gravel Concrete Pad

Asphalt Drive

Bldg 3259

Bldg 3258

Former Tank Footing

BG01

"A" Street

Asphalt Drive

Concrete Incinerator Pad

HWMU MON. NO. 124

Concrete Drive

Bldg 3157

Bldg 3156

-N-

0 25

Feet

APPROXIMATE SCALE

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FIGURE 2-4

HWMU 124
DETAILED LOCATION MAP

DUGWAY PROVING GROUND
DUGWAY, UTAH